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10/553,198	10/13/2005	Shigeru Murakami	278857US0PCT	1250
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER CHEUNG, WILLIAM K	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/553,198	Applicant(s) MURAKAMI, SHIGERU	
	Examiner WILLIAM K. CHEUNG	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 10-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 10-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the amendment filed January 21, 2009, claims 1, 3-9 have been cancelled. Claims 2, 10-19 are pending.
2. In view of the amendment filed January 21, 2009, the rejection of Claims 1, 3-9 under 35 U.S.C. 102(b) as being anticipated by Lupia et al. (WO 00/58975), is withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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4. Claims 2, 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lupia et al. (WO 00/58975) for the reasons adequately set forth from paragraph 5 of the office action of September 19, 2008, as affirmed by Weng et al. (US 6,063,846).

2. A combination of a vinyl chloride-based resin molded article and a polyolefin-based resin molded article that are positioned in contact with or near to each other, said polyolefin-based resin molded article being made of a polyolefin-based resin composition comprising:

(A) 100 parts by mass of a polyolefin-based resin; and

(B) 0.01 to 5 parts by mass of a phenol-based antioxidant containing no aliphatic ester group and/or a sulfur-based antioxidant containing no aliphatic ester group.

18. A combination of a vinyl chloride-based resin molded article and a polyolefin-based resin molded article that are positioned in contact with or near to each other, said polyolefin-based resin molded article being made of a polyolefin-based resin composition comprising 100 parts by mass of polypropylene; 0.01 to 3 parts by mass of 1,2-bis(3,5-di-t-butyl-4-hydroxyhydrocinnamoyl)hydrazine; and 0.01 to 5 parts by mass of at least one antioxidant selected from the group consisting of:

(i) 2,6-di-t-butyl-4-methyl phenol;

(ii)

1,1,3-tris{2-methyl-4-[3-(3,5-di-t-butyl-4-hydroxyphenyl)propionyloxy]-5-t-butyl phenyl}butane;

(iii) 1,3,5-trimethyl-2,4,6-tris(3,5-di-t-butyl-4-hydroxybenzyl)benzene;

(iv) tris(3,5-di-t-butyl-4-hydroxybenzyl)isocyanurate; and

(v) 4,4'-butylidenebis-(3-methyl-6-t-butylphenol).

19. A combination of a vinyl chloride-based resin molded article and a polyolefin-based resin molded article that are positioned in contact with or near to each other, said polyolefin-based resin molded article being made of a polyolefin-based resin composition comprising 100 parts by mass of polypropylene; 50 to 250 parts by mass of magnesium hydroxide; and 0.01 to 5 parts by mass of at least one antioxidant selected from the group consisting of:

(i) 2,6-di-*t*-butyl-4-methyl phenol;

(ii)

1,1,3-tris{2-methyl-4-[3-(3,5-di-*t*-butyl-4-hydroxyphenyl)propionyloxy]-5-*t*-butyl phenyl}butane;

(iii) 1,3,5-trimethyl-2,4,6-tris(3,5-di-*t*-butyl-4-hydroxybenzyl)benzene;

(iv) tris(3,5-di-*t*-butyl-4-hydroxybenzyl)isocyanurate; and

(v) 4,4'-butylidenebis-(3-methyl-6-*t*-butylphenol).

Lupia et al. (abstract; page 5, line 1-17; page 24, claims 1, 2) disclose polyolefin wire insulations comprising polyolefin blends comprising two or more of the disclosed polymers (page 5, line 3), which includes alpha olefins such as polypropylene (page 5, line 7) and polyvinyl chloride (page 5, line 15, 20). Although Lupia et al. do not disclose the polymer blend to be 50/50 weight ratio, in view of that the polymers disclosed are functionally equivalent which carries the same importance in a polymer blend, it would not be difficult for one of ordinary skill in art to appreciate the 50/50 weight ratio of the polymer blends disclosed. Although Lupia et al. disclose a list of polyolefins that include other kind of polyolefins, since Lupia et al. clearly spell out the type of polymeric components for the polymer blends, the examiner has a reasonable basis that the teachings is explicit enough that it is part of the objective set forth by Lupia et al.

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Regarding the claimed metal deactivator, Lupia et al. (page 23, line 8; page 25, claim 4) clearly disclose the use of Irganox MD 1024 (1,2-bis(3,5-di-t-butyl-hydroxyhydrocinnamoyl) hydrazine) as claimed in an amount ranging from about 0.1 weight percent to about 2.0 weight percent based on the weight of the polyolefin (page 26, claim 6).

Regarding the claimed Irganox 3114 (tris(3, 5-di-t-butyl-4-hydroxybenzyl) isocyanurate), Lupia et al. (page 4, line 3-4) clearly disclose the use of Irganox 3114.

Regarding the claimed "metal hydroxides", Lupia et al. (page 20, line 19-21) clearly disclose the use of metal hydroxides such as magnesium hydroxide and aluminum hydroxide in an amount ranging from 0.01 to about 60 weight percent based on the weight of the polyolefin.

Regarding the claimed "2, 6-di-tert-butyl-4-methylphenol (BHT)", Lupia et al. (page 9, line 27) clearly disclose the incorporation of "BHT" into the polyolefin blends of Lupia et al. Lupia et al. (page 25, claim 5) further disclose that a range from about 0.05 to about 1 weight percent of antioxidant can be incorporated into the polyolefin blends disclosed.

Because the composition as taught in Lupia et al. are substantially identical to the invention as claimed, the examiner has a reasonable basis to believe that the claimed feature "containing no aliphatic ester group" are inherently possessed in Lupia et al.

The difference between Lupia et al. and claims 2, 10-19 is that Lupia et al. do not teach the combination of a vinyl chloride based resin molded article and a polyolefin-

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based resin molded article are positioned in contact with or near to each other to enclose one another.

However, Lupia et al. (page 24, claim 1) disclose a cable having interstices filled with hydrocarbon materials. Since hydrocarbon materials are merely low molecular weight materials of polyolefins, it would not be difficult to one of ordinary skill in art to recognize that a polyolefin materials can replace the hydrocarbon materials as taught in Lupia et al. Motivated by expectation of success of archiving the multilayers structure as taught in Lupia et al., it would have been obvious to one of ordinary skill to assemble the polyolefins materials which includes polypropylene and polyvinyl chloride in a multilayer sheathing structure onto the disclosed cable to obtain the molded article features of claims 2, 10-19.

Regarding the “enclosed” features of claims 10, 11, Lupia et al. (abstract; page 5, line 1-17; page 24, claims 1, 2) disclose polyolefin wire insulations comprising polyolefin blends comprising two or more of the disclosed polymers (page 5, line 3), which includes alpha olefins such as polypropylene (page 5, line 7) and polyvinyl chloride (page 5, line 15, 20). Although Lupia et al. do not disclose the polymer blend to be 50/50 weight ratio, in view of that the polymers disclosed are functionally equivalent which carries the same importance in a polymer blend, it would not be difficult for one of ordinary skill in art to appreciate the 50/50 weight ratio of the polymer blends disclosed. When the two polymers are blended, both the PVC and the polypropylene are enclosing each other because both the outerlayer and the inner layer of the blend comprise both PVC and polypropylene.

Regarding claim 12, the claimed "directly or indirectly laminated" feature is a process related feature for producing the article as claimed. Regarding a product by process invention, applicants must recognize that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Response to Arguments

5. Applicant's arguments filed January 21, 2009 have been fully considered but they are not persuasive.

Applicants argue that applicants' specification indicates that the claimed invention relates to a composition that does not contain any aliphatic ester group and/or sulfur-based antioxidant containing an aliphatic ester group. However, the examiner disagrees because the claims as written do not support such argument. Applicants fail to recognize that the claimed component (B) relates to a phenol-based antioxidant containing no aliphatic ester group and/or.... However, the claim 2 as written do not exclude any other component that contain an aliphatic ester group and/or a sulfur-based antioxidant containing an aliphatic ester group, in view of the recitation "comprising" (claim 2, line 4).

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Regarding applicants' argument that claims 2, 18, 19 requires a combination of a vinyl-chloride based resin molded article and a polyolefin-based resin molded article that are position in contact with or near to each other, applicants must recognize that the claims as written do not support the argument where "a vinyl-chloride based resin molded article and a polyolefin-based resin molded article that are positioned in contact with or near to each other". Instead the claims require one of the molded resin article to be enclosed by the other molded resin article. Applicants must recognize that polyolefin resins and polyvinyl chloride are not compatible to each other as affirmed by Weng et al. (US 6,063,846, col. 1, line 7-9).

A variety of rigid polyvinyl chloride (PVC) resin and polyolefin blends is known. As these two materials are normally incompatible, compatibilizers are sometimes added to improve the physical and mechanical properties of the blends. Blends made from rigid PVC and polyolefins are useful in applications such as the manufacture of rigid plastic pipes and tubing.

Therefore, when polyolefin and polyvinyl chloride resins (or articles) are molded together, the two polymers (articles) will be enclosed each other, depending on the weight ratio of the two disclosed polymers. Therefore, the examiner has a reasonable basis that "a vinyl-chloride based resin molded article and a polyolefin-based resin molded article that are positioned in contact with or near to each other" has been met by Lupia et al.

Regarding applicants' argument that the invention as claimed exhibits remarkably reduced oxidative deterioration as evidenced by elongation retention, as compared to the rapid oxidative deterioration exhibited by the conventional polyolefin-based resin molded articles of comparative examples 1-4, applicants fail to recognize that the

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argued "comparative examples" are not excluded by the invention as claimed.

Applicants fail to recognize that the claimed component (B) relates to a phenol-based antioxidant containing no aliphatic ester group and/or.... However, the claim 2 as written do not exclude any other component that contain an aliphatic ester group and/or a sulfur-based antioxidant containing an aliphatic ester group, in view of the recitation "comprising" (claim 2, line 4). Therefore, the examiner has a reasonable basis to believe that the comparative data fail to show the criticality of the claimed invention, which clearly does not exclude any aliphatic ester group and/or sulfur-based antioxidant containing an aliphatic ester group.

In view of the reasons set forth above, the rejection of claims 2, 10-19 is maintained.

Conclusion

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM K. CHEUNG whose telephone number is (571)272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William K Cheung/
Primary Examiner, Art Unit 1796

William K. Cheung, Ph. D.
Primary Examiner
March 17, 2009

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